

## Φ4.0mm 650nm Laser Module

### Features

- APC (auto power control) IC inside
- Low current consumption of the APC circuit
- Surge current protection
- High quality lens for output beam



### Absolute maximum ratings

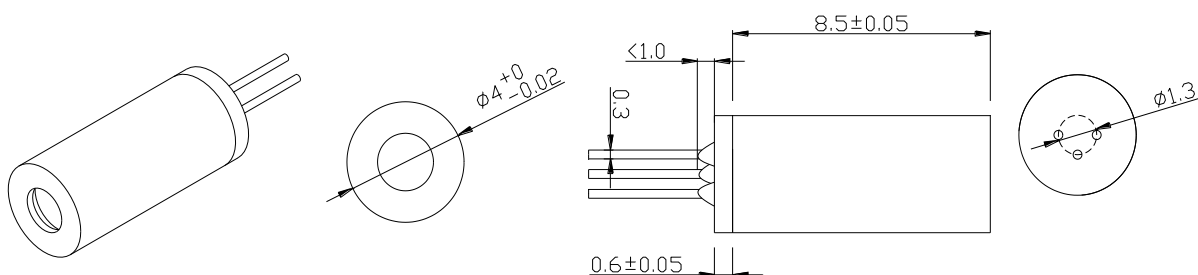
Parameter	Symbol	Rating	Unit
Power supply voltage	V <sub>cc</sub>	3.3	V
Laser Module optical output power	P <sub>o</sub>	<3.5	mW
Operation temperature	T <sub>opr</sub>	0~40	°C
Storage temperature	T <sub>stg</sub>	-20~75	°C

### Electrical and optical characteristics (T<sub>c</sub>=25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Wavelength	λ		655		nm	P <sub>o</sub> = 3mW
Operation current	I <sub>op</sub>	-	-	40	mA	P <sub>o</sub> = 3mW ; V <sub>cc</sub> =3V
Optical output power	P <sub>out</sub>	2		3	mW	V <sub>cc</sub> =3V
Operation voltage	V <sub>op</sub>	2.5	-	3.3	Volt	

\* Sufficient heat dissipation is required for CW operation.

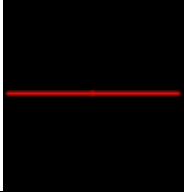
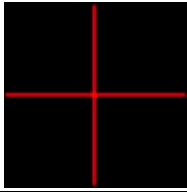
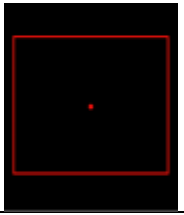

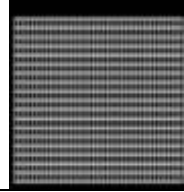

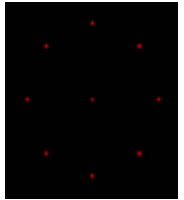
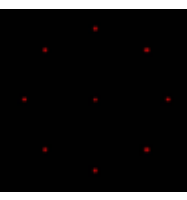
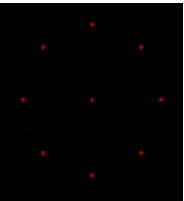



### Outline dimensions (Units: mm)



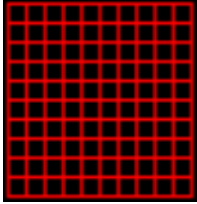
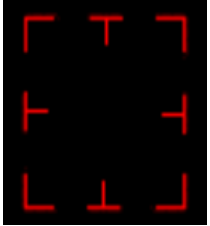
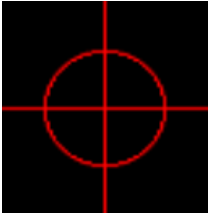
Aperture Size : 1.3mm

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### Pattern Type

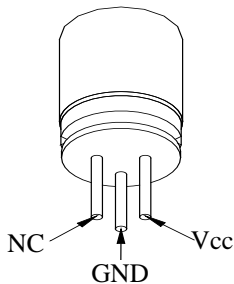
Arima P/N	APCD-650-D1-C3-01		APCD-650-D1-C3-02	
Pattern type	Line - 65°		Crosshair - 65°	
Arima P/N	APCD-650-D1-C3-03		APCD-650-D1-C3-04	
Pattern type	Line Square		Lines Square	
Arima P/N	APCD-650-D1-C3-05		APCD-650-D1-C3-06	
Pattern type	Gridline		Circle	
Arima P/N	APCD-650-D1-C3-07		APCD-650-D1-C3-08	
Pattern type	1:8 Dot Circle - 1°		1:8 Dot Circle - 2°	
Arima P/N	APCD-650-D1-C3-09		APCD-650-D1-C3-10	
Pattern type	1:8 Dot Circle - 4°		1:16 Dot Circle - 2°	
Arima P/N	APCD-650-D1-C3-11		APCD-650-D1-C3-12	
Pattern type	Focus net		Gridline (60x60)	

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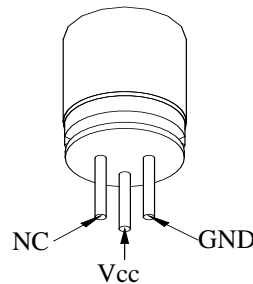
Arima P/N	APCD-650-D1-C3-13		APCD-650-D1-C3-14	
Pattern type	Gridline (10x10)		Lines Square (FOV : 35°)	
Arima P/N	APCD-650-D1-C3-15			
Pattern type	Circle + Cross			

### PIN Assignment

**A type** : Heat sink stand (-)



**B type** :Heat sink stand (+)



#### ● Precautions

- \* Do not operate the device above maximum ratings. Doing so may cause unexpected and permanent damage to the device.
- \* Take precautions to avoid electrostatic discharge and/or momentary power spikes. A change in the characteristics of the laser or premature failure may result.
- \* Proper heat sinking of the device assures stability and lifetime. Always ensure that maximum operating temperatures are not exceeded.
- \* Observing visible or invisible laser beams with the human eye directly, or indirectly, can cause permanent damage. Use a camera to observe the laser.
- \* No laser device should be used in any application or situation where life or property is at risk in event of device failure.
- \* Specifications are subject to change without notice. Ensure that you have the latest specification by contacting us prior to purchase or use of the product.

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*For reference only. Contents above are subject to change without notice.*